1. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-7x+8} - \sqrt{4x+4} = 0$$

A. $x \in [0.69, 2.16]$

B. $x_1 \in [-0.38, 0.45]$ and $x_2 \in [-1.86, 2.14]$

C. $x_1 \in [-1.05, -0.37]$ and $x_2 \in [-1.86, 2.14]$

D. $x \in [-0.38, 0.45]$

E. All solutions lead to invalid or complex values in the equation.

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2. What is the domain of the function below?

$$f(x) = \sqrt[6]{-3x+8}$$

A. $[a, \infty)$, where $a \in [0.8, 5.1]$

B. $[a, \infty)$, where $a \in [-0.1, 0.6]$

C. $(-\infty, \infty)$

D. $(-\infty, a]$, where $a \in [-1.6, 2.6]$

E. $(-\infty, a]$, where $a \in [0.5, 4.4]$

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3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{12x^2+48} - \sqrt{50x} = 0$$

A. $x \in [2.6, 4]$

B. $x_1 \in [-5.1, -1.3]$ and $x_2 \in [-2.5, -0.5]$

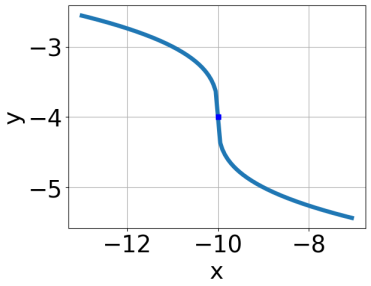
C. $x \in [1.2, 2.6]$

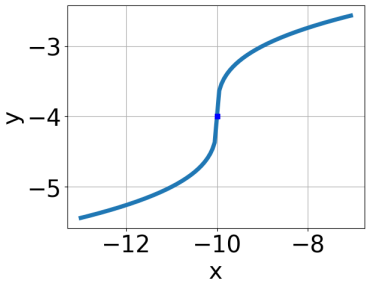
D. All solutions lead to invalid or complex values in the equation.

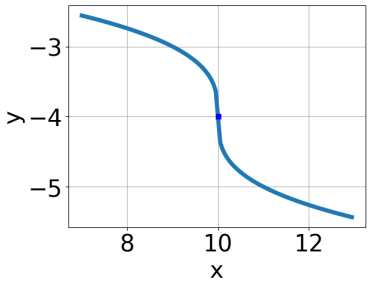
E. $x_1 \in [1.2, 2.6]$ and $x_2 \in [0.67, 10.67]$

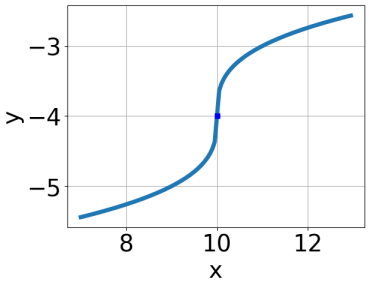
4. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x+10} - 4$$

A. 

C. 

B. 

D. 

E. None of the above.

5. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-18x^2 - 18} - \sqrt{85x} = 0$$

A. $x \in [-1.22, 0.78]$

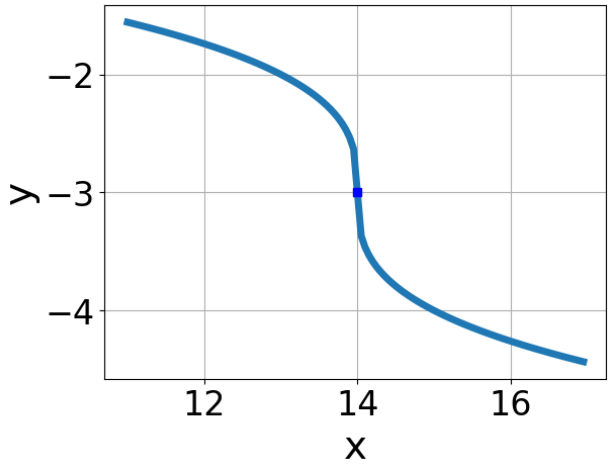
B. $x_1 \in [2.5, 9.5]$ and $x_2 \in [0.13, 1.08]$

C. All solutions lead to invalid or complex values in the equation.

D. $x_1 \in [-5.5, -2.5]$ and $x_2 \in [-0.33, -0.17]$

E. $x \in [-5.5, -2.5]$

6. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x+14} - 3$

B. $f(x) = \sqrt[3]{x-14} - 3$

C. $f(x) = -\sqrt[3]{x+14} - 3$

D. $f(x) = -\sqrt[3]{x-14} - 3$

E. None of the above

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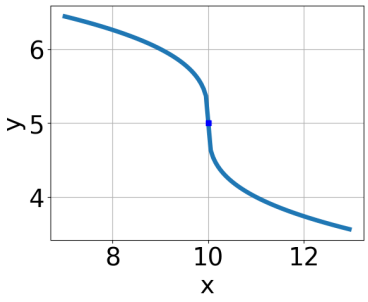
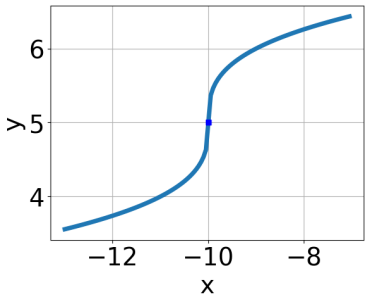
7. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x-10} + 5$$

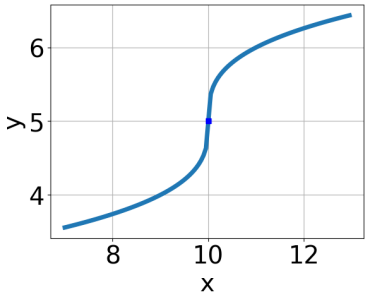
A.



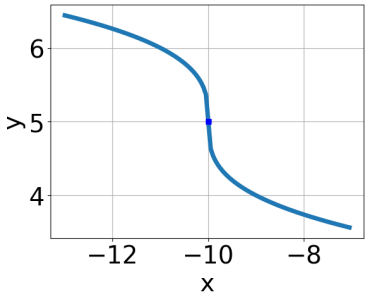
C.



B.



D.



E. None of the above.

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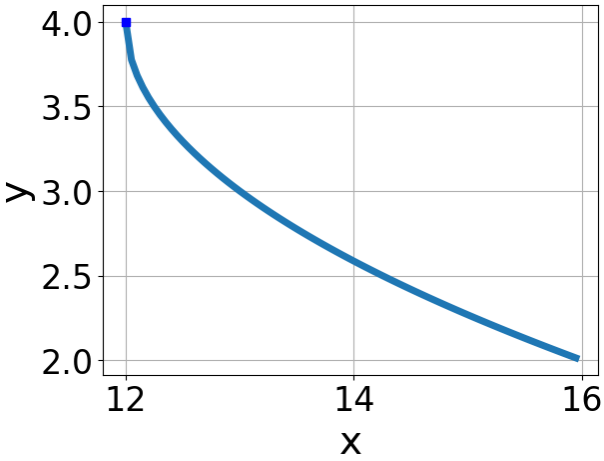
8. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x+12}+4$

B. $f(x) = \sqrt[3]{x-12}+4$

C. $f(x) = -\sqrt[3]{x+12}+4$

D. $f(x) = -\sqrt[3]{x-12}+4$

E. None of the above

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9. What is the domain of the function below?

$$f(x) = \sqrt[3]{7x+6}$$

A. The domain is $[a, \infty)$, where $a \in [-1.06, -0.52]$

B. $(-\infty, \infty)$

C. The domain is $(-\infty, a]$, where $a \in [-1.11, 0.26]$

D. The domain is $[a, \infty)$, where $a \in [-1.29, -1.11]$

E. The domain is $(-\infty, a]$, where $a \in [-2.33, -0.99]$

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10. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{9x+6} - \sqrt{-2x+9} = 0$$

A. $x \in [-0.29, 0.79]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [-0.99, -0.24]$ and $x_2 \in [-4.73, 1.27]$

D. $x \in [-1.41, -1.07]$

E. $x_1 \in [-0.99, -0.24]$ and $x_2 \in [4.5, 5.5]$